

CLAIMS

61
SUB 31

1. A picture decoding and coding apparatus comprising a picture coding apparatus including picture coding means for coding picture information, and transmission control means for transmitting or recording the coded various information, and a picture decoding apparatus including reception control means for receiving the coded various information, picture decoding means for decoding received various information, picture synthesizing means for synthesizing one or more decoded pictures, and output means for delivering the synthesized picture.

2. A sound decoding and coding apparatus comprising a sound coding apparatus including sound coding means for coding sound information, and transmission control means for transmitting or recording the coded various information, and a sound decoding apparatus including reception control means for receiving the coded various information, sound decoding means for decoding received various information, sound synthesizing means for synthesizing one or more decoded sounds, and output means for delivering the synthesized sound.

SUB 32

3. A picture and sound coding and decoding apparatus comprising the picture decoding and coding apparatus of claim 1 and the sound decoding and coding apparatus of claim 2, wherein said picture coding apparatus and/or

said sound coding apparatus includes priority providing means for determining the priority of processing when coded information is overloaded by a predetermined standard, and corresponding between said coded information and said determined priority, and said picture decoding apparatus and/or sound decoding apparatus includes priority decision means for determine the method of processing according to the priority when the received various information is overloaded.

4. A picture and sound coding and decoding apparatus of claim 3, wherein said priority providing means and priority decision means determine the priority providing method for determining the sequence of decoding, synthesizing and displaying of coded pictures or sounds, and the processing method of presence or absence, or determine the priority of the object of processing, according to at least one information or more out of the picture coding method, picture size, contrast, picture synthesizing ratio, quantization step, frame number, number of frames, difference of inter-frame coding and intra-frame coding, display position, display time, and difference of voiced section and silent section.

5. A picture and sound coding and decoding apparatus of claim 3, wherein said priority providing means and priority decision means determine the priority to be assigned to the coded information, or determine the

priority of object of processing when decoding, according to the time required for decoding or the time required for coding when coding the picture.

6. A picture and sound coding and decoding apparatus of claim 3, wherein said priority providing means and priority decision means define the execution rate for specifying the number of times of execution of processing of decoding, synthesizing or displaying of pictures, and determine the priority to be assigned to the coded information, or determine the priority of object of processing when decoding, according to the execution rate.

7. A picture and sound coding and decoding apparatus of claim 4, wherein the priority is set high in processing in overload of at least a frame of intra-frame coding, first frame or last frame, or scene change frame.

8. A picture and sound coding and decoding apparatus of claim 4, wherein same priority is assigned in the inter-frame coded pictures.

9. A picture and sound coding and decoding apparatus of claim 4, wherein plural steps of priority are assigned in intra-frame coded pictures.

10. A picture coding and decoding apparatus of claim 1, wherein said picture decoding means decodes the picture in a specified unit smaller than one frame.

11. A picture and sound coding and decoding apparatus

comprising the picture decoding and coding apparatus of claim 1 and the sound decoding and coding apparatus of claim 2, wherein the sequence of pictures and sounds to be decoded, synthesized or displayed, presence or absence, or reproducing method is determined, according to at least one information or more out of the accounting information, service content information, password, user code, nation code, information showing rank of synthesis or display, information showing rank of decoding, user's instruction, terminal processing capacity, and reproduction time.

12. A picture and sound coding and decoding apparatus comprising the picture decoding and coding apparatus of claim 1 and the sound decoding and coding apparatus of claim 2, wherein said reception control means handles the information describing the mutual relation of information of pictures or information of sounds, out of the various information, independently as different information from the picture information or sound information.

13. A picture and sound coding and decoding apparatus of claim 12, wherein the describing method is distinguished by an identifier for distinguishing the describing method for describing the mutual relation of information of pictures or information of sounds.

14. A picture and sound coding and decoding apparatus

comprising the picture decoding and coding apparatus of claim 1 and the sound decoding and coding apparatus of claim 2, wherein said picture synthesizing means or sound synthesizing means holds, controls and utilizes the result of decoding until it is instructed to discard the result of decoding from the transmission side.

15. A picture and sound coding and decoding apparatus comprising the picture decoding and coding apparatus of claim 1 and the sound decoding and coding apparatus of claim 2, wherein the user is informed of the presence of pictures or sounds that cannot be synthesized because necessary decoded pictures or sounds are not prepared, when synthesizing the pictures or sounds, on the basis of the information describing the mutual relation of information of pictures or information of sounds.

862040-24515050
SUBS 16. A real time picture coding apparatus comprising one or more picture input means for feeding pictures, picture input control means for controlling the control state of the picture input means, other terminal control request control means for controlling the reception state of a reception terminal, coding process decision means for determining the coding method of pictures depending on at least the controlled reception state of the reception terminal or the control state of said picture input means, picture coding means for coding said input picture according to the result of decision by the coding

process decision means, and output means for delivering the coded picture.

17. A real time picture coding apparatus of claim 16, wherein said coding process decision means determines at least the priority of coding, priority information of processing when overloaded, coding method, value of quantization step, number of frames, size of picture to be coded, or presence or absence of coding, according to the control state of said picture input means.

18. An information transmission system, being an information transmission system using at least one of the picture decoding and coding apparatus of claim 1 and the sound decoding and coding apparatus of claim 2 as the reception terminal, and at least one of the picture decoding and coding apparatus of claim 1, the sound decoding and coding apparatus of claim 2, and the real time picture coding apparatus of claim 16 as the transmission terminal, and connecting these terminals through a communication route, wherein one of the presence or absence of coding of pictures or sounds, priority of coding, coding method, picture size to be coded, value of quantization step, number of frames, and priority of processing when the reception terminal is overloaded is determined at the transmission terminal, by transmitting at least one of the load of the reception terminal, the information about the priority of coded

Information to be processed as being determined in the priority decision means at the reception terminal, and the frame skip situation at the reception terminal, to the transmission terminal.

19. An information transmission system, being an information transmission system using the picture decoding and coding apparatus of claim 1 and the sound decoding and coding apparatus of claim 2 as the reception terminals, and the picture decoding and coding apparatus of claim 1, the sound decoding and coding apparatus of claim 2, and the real time picture coding apparatus of claim 16 as the transmission terminals, and connecting these terminals through a communication route, wherein the pictures are transmitted by the transmission method accompanied by retransmission, the sounds are transmitted by the transmission method not accompanied by retransmission, and the coding process decision means determines at least one of the coding method, value of quantization step, number of frames, picture size to be coded, presence or absence of coding, and priority of processing when the reception terminal is overloaded, is determined at the transmission terminal, by transmitting at least the retransmission count of pictures, error rate of received information or information about discarding rate, to the transmission terminal.

20. (Added) A picture coding apparatus comprising

picture coding means for coding picture information, and transmission control means for transmitting or recording coded various information,

wherein the coded various information is delivered to a picture decoding apparatus comprising reception control means for receiving coded various information, picture decoding means for decoding the received various information, and output means for delivering the decoded picture.

21. (Added) A picture decoding apparatus comprising reception control means for receiving coded various information transmitted from a picture coding apparatus including picture coding means for coding picture information, and transmission control means for transmitting or recording coded various information,

picture decoding means for decoding the received various information, and

output means for delivering the decoded picture.

22. (Added) A sound coding apparatus comprising sound coding means for coding sound information, and transmission control means for transmitting or recording coded various information,

wherein the coded various information is delivered to a sound decoding apparatus comprising reception control mans for receiving coded various information, sound decoding means for decoding the received various

information, and output means for delivering the decoded sound.

23. (Added) A sound decoding apparatus comprising reception control means for receiving coded various information transmitted from a sound coding apparatus including sound coding means for coding sound information, and transmission control means for transmitting or recording coded various information,

sound decoding means for decoding the received various information, and

output means for delivering the decoded sound.

ADD D3
ADD F7